

prices they must charge. IXC's, however, take no other action that would discourage end users from choosing local carriers that set high terminating access charges, even though high terminating access rates make the IXC's, as well as their customers, worse off. Presumably, the implicit argument is that, once an end user has chosen the local provider of terminating access, IXC's have little choice but to pay higher terminating access rates in order to complete calls.

The following analysis shows that this understates the options available to IXC's and their potential role in the market. IXC's can play an active rather than a passive role as purchasers of terminating access. In this section, we look at the bargaining power IXC's can exercise in negotiating terminating access charges with competing local carriers. In the next section, we look at pricing responses IXC's could use to make end users feel the effects of choosing a local carrier that sets high terminating access rates.<sup>4</sup>

The record of CLEC-IXC negotiations to date does not contain examples of excessive pricing of terminating access, suggesting that CLEC's may not, in fact, possess the market power assumed in the simple analysis.<sup>5</sup> The record of CMRS-IXC negotiations is also inconsistent with the prediction that a small carrier could force a large carrier to pay high prices for termination services. When CMRS carriers first offered cellular service, they sought interconnection with the landline networks to enable their customers to call and be called by subscribers to the public switched telephone network. Cellular subscribers, as called parties, were in a position to determine the carrier that terminated the call to them, and, under the analysis outlined by the Commission, would not have minded if the cellular carrier chose to set high termination rates. Yet, the record demonstrates that CMRS carriers were not able to charge excessive rates for terminating

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<sup>4</sup> The Commission in its *Notice* asked whether IXC's might discourage higher terminating access prices by acting as suppliers of local service and terminating access. (NPRM at Para 272.) This paper does not analyze the effect of IXC's' participation as suppliers of local service.

<sup>5</sup> "CLEC's must meet or beat LEC rates and rate structures in order to successfully enter the local market. ... Indeed, SNI and other CLEC's have, to date, uniformly matched or underpriced LEC terminating access rates in their filed tariffs." Comments of Spectranet International, Inc., CC Docket No. 92-262, page 7.

service.<sup>6</sup> This record suggests it is important to consider carefully the bargaining position of IXC's in negotiating the terminating access charges they will pay to new CLEC's.

Analyzing bargaining outcomes can be complex, but some basic considerations suggest it is quite likely that IXC's could successfully insist on not paying more for terminating access than the prevailing rate of the ILEC in that area. According to modern bargaining theory, outcomes are strongly affected by the disagreement points of the parties.<sup>7</sup> A party's disagreement point depends on the payoff it receives so long as offers are refused and bargaining continues, or if negotiations break down entirely. The disagreement points are crucial in part because neither party can be forced to accept a settlement that leaves it worse off than a failure to agree.

In this case, neither the IXC nor a CLEC will agree to terminating access rates that leave it worse off than failing to interconnect. Each IXC can examine the terms and conditions of the CLEC's proposed interconnection arrangement, and each IXC has the option to refuse interconnection if the rates are excessive (just as the CLEC has the option of refusing IXC counter-offers of lower terminating rates).<sup>8</sup> What are the payoffs to each in the absence of agreement? Without interconnection to the IXC, the CLEC could not offer subscribers a package of services that included receiving long distance calls from that IXC. Failure to reach an interconnection agreement with an important IXC would make it difficult or impossible for a CLEC to attract customers for its switched local and access services. This, in turn, affects the disagreement points for both the IXC and CLEC.

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<sup>6</sup> In CC Docket No. 95-185 (Interconnection between Local Exchange Carriers and Commercial Mobile Radio Service Providers, Notice of Proposed Rulemaking) the Commission reports: "PCIA stated that, not only have LECs declined to pay compensation to cellular and paging companies for terminating their traffic, but some LECs have actually imposed originating access charges on those carriers for delivering traffic to them." In addition, according to one source: "CMRS carriers also do not receive switched access revenues under current access charge practices." (Comments of the Personal Communications Industry Association, CC Docket No. 96-262.)

<sup>7</sup> See, for example, K. Binmore, A. Rubenstein, and A. Wolinsky, "The Nash Bargaining Solution in Economic Modeling," *Rand Journal of Economics*, Summer 1986, pp. 176-188.

<sup>8</sup> We understand that the refusal to accept excessive rates is unlikely to violate Section 251(a)(1) of the Act, which imposes interconnection obligations on all telecommunications carriers. The Act does not require any carrier to accept terms set unilaterally by another, but to develop interconnection agreements by negotiating in good faith.

In this situation, an IXC knows that few if any calls would be placed to customers served by a CLEC with whom it refuses to reach an interconnection agreement. Without that agreement, few, if any, end users will choose the CLEC. Instead, almost all potential CLEC customers will choose a different provider of terminating access. Absence of an agreement will not prevent the IXC from completing many calls; instead, the IXC simply will have to pay terminating access to a different carrier. So long as the ILEC is the dominant provider of local service, the IXC will pay ILEC terminating rates for most of those calls instead of whatever rate the new CLEC charges. Thus, the profits the IXC will expect in the absence of agreement are likely to be little lower than the profits it would get if the CLEC set the same rate as the ILEC for terminating access. In this case, the maximum terminating rate the IXC would pay rather than do without an interconnection agreement -- its disagreement point -- is likely to be at or only slightly above the ILEC rate for terminating access. Any higher rate would leave the IXC worse off than failing to agree.

For the CLEC, on the other hand, continued disagreement would be very costly.<sup>9</sup> It is quite possible that switched local service would not be a viable business without interconnection agreements with all the major IXCs. Continued disagreement would threaten the CLEC with business failure and the loss of any sunk investments already committed to that service. In all likelihood, the payoff a CLEC would realize from accepting a terminating access rate close to the prevailing ILEC rate would be considerably higher than the payoff without an agreement. Indeed, if ILEC rates remain close to their current levels, agreeing even to a considerably lower rate might leave the CLEC better off than disagreement.<sup>10</sup>

In this situation, the CLEC would have little ability to force IXCs to pay terminating access rates above prevailing ILEC rates. Even if an IXC's disagreement point were somewhat higher, CLECs would be poorly situated to push the settlement that

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<sup>9</sup> The CLEC would be handicapped not only in attracting customers, but by the inability to receive terminating access revenue from IXCs with whom it did not have an interconnection agreement.

<sup>10</sup> How much lower a rate the CLEC could accept and remain viable, or do better than without an agreement, would depend on a variety of competitive conditions.

close to the IXC's disagreement point. A CLEC would be reluctant to risk the losses it would face during a prolonged period of disagreement or if the IXC broke off negotiations. Finally, the IXC's bargaining position could be further strengthened because a single negotiation would be only one of series of negotiations IXCs would have with this and other CLECs. An IXC will have an interest in establishing and maintaining a reputation for being unwilling to pay high terminating access rates so that it could credibly threaten to walk away from other negotiations rather than accept high rates.<sup>11</sup> This would make it even less likely that an IXC would agree to pay a terminating access rate above the prevailing ILEC level.<sup>12, 13</sup>

In sum, it is quite plausible that large IXCs will have considerable bargaining leverage in dealing with CLECs who will be trying to establish a foothold in the market. The IXC's incentive to obtain low terminating access rates can be viewed as the motivation of an agent negotiating on behalf of its customers who originate long distance calls, thereby forcing the CLEC and its potential subscribers to take into account the effects of high terminating access charges on those who originate long distance calls. It is quite likely that IXCs would have sufficient bargaining leverage to prevent CLECs from charging rates higher than those of the ILEC. In effect, regulation of ILEC terminating access rates would then also set a cap on the rates that CLECs could charge.

### ***3.3 Price Structures That Internalize The Effects of Terminating Access Rates***

If they didn't want to play a high stakes bargaining game over interconnection agreements, IXCs might instead (or in addition) respond with new pricing schemes that

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<sup>11</sup> D. Kreps, P. Milgrom, J. Roberts and R. Wilson, "Reputation and Imperfect Information," *Journal of Economic Theory*, 27: 253-279, contains a formal analysis of the importance of credibility and reputation in a somewhat different context.

<sup>12</sup> If one is skeptical that an IXC could plausibly threaten disconnection rather than agreement, a recent episode is worth considering. In January, 1997, when the contract under which MCI was providing Signaling System No. 7 services to WorldCom expired, MCI terminated signaling service. The dispute was resolved and service reinstated after about two hours. *Telecommunications Reports*, January 27, 1997.

<sup>13</sup> Because of the ILEC's market share, it is much less clear that IXCs would have sufficient leverage in negotiations with an ILEC to force reductions in terminating access rates, since the disagreement point for an IXC in this negotiation could be a rate at, or even substantially higher than, the now-prevailing rates.

would internalize the effects of high terminating access prices. Unless prevented by regulation, an IXC could bill the called party directly for any difference between the terminating access charge of the called party's LEC and the rate charged by the ILEC in that area.<sup>14</sup> From an IXC's standpoint, the pricing plan would allow it to avoid the competitive disadvantage of having to pass on higher terminating access costs to customers who are choosing among competing IXCs. At the same time, it would completely internalize the effects of high terminating access prices: customers who selected a CLEC with excessively high rates for terminating access would bear the additional cost of doing so. This plan would not prevent a customer from choosing a LEC that was efficient despite higher costs and prices for terminating access (unlike a regulatory prohibition on charging more than the ILEC). If the CLEC were an attractive choice for other reasons (better customer service, new features, consolidated billing, etc.), this pricing plan would promote economically efficient choices by customers to receive the kind of service they wanted while paying the additional costs they caused. Unless a CLEC could offer customers service quality that compensated for higher prices, however, it would have an incentive to keep its rates for terminating access at or below the ILEC's rates.

If IXCs were to adopt separate terminating charges to deliver calls to customers whose LECs set high terminating access rates, CLECs would be under pressure from their customers to limit any excess of their terminating access rates above the ILEC's terminating access rate to the additional perceived value of its differentiated service.

#### **4. Implications For Regulation Of Terminating Access Offered By CLECs And ILECs**

This paper has identified a variety of market mechanisms that could cause end users to avoid choosing competitive local carriers that set high terminating access rates. These mechanisms range from reasons end users already have to care about the effects of higher terminating access rates on the benefits they get from receiving calls, to actions

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<sup>14</sup> We understand that there may be a question about whether such a pricing plan would be consistent with Section 254(g). As a matter of economics, however, it would be desirable to avoid blocking market responses that would internalize the effects of terminating access prices and prevent market failure.

IXCs could take in negotiating interconnection agreements, to developing new pricing plans that would make end users feel the effects of high terminating access. This analysis suggests that the Commission should be very skeptical that market failure will prevent competitive forces from constraining the charges that competitive local exchange carriers set for terminating access.

A CLEC will have to compete with at least the ILEC, and possibly with other CLECs. The analysis of this paper suggests that there are a number of mechanisms that could allow competition to constrain the prices a CLEC can charge for terminating access, just as market mechanisms can constrain the prices it can charge for local service or originating switched access. Furthermore, so long as ILEC rates for terminating access remain regulated, the ILEC rate is likely to effectively set a cap on the rates a CLEC can charge, since any potential CLEC customer will have the alternative of ILEC service, which in turn indirectly gives IXCs the alternative of using, or encouraging customers to make use of, ILEC terminating access.

It does not follow from this analysis, however, that the Commission should be equally skeptical of the need to regulate rates for ILEC terminating access. Continued regulation of ILEC terminating access can be in the public interest for reasons that have nothing to do with market failure and market power created because end users ignore the effects on others of terminating access rates. Even in the complete absence of that market failure, ILECs may continue to have market power over terminating access for an entirely different reason: substantial numbers of customers do not have alternatives to ILEC service available at competitive prices. In this case, ILECs would continue to have market power over terminating access, just as they would continue to have market power over the supply of originating access and local service.